

REMARKS

This is intended as a full and complete response to the Office Action dated July 16, 2003, having a shortened statutory period for response set to expire on October 16, 2003. Please reconsider the claims pending in the application for reasons discussed below.

Claims 1 - 8, 10 - 22 and 24 - 75 remain pending in the application and are shown above. Claims 1 - 8, 10 - 22 and 24 - 75 stand rejected by the Examiner. Reconsideration of the rejected claims is requested for reasons presented below.

Claims 1, 27, and 38 have been amended to correct matters of form and/or to clarify the invention. However, Applicants submit that these amendments are not presented to distinguish a reference, and thus, the claims as amended are entitled to a full range of equivalents.

Claims 1 - 6, 10 - 18, 22, 24 - 52, 55 - 59, 62 and 63 stand rejected under 35 USC § 102(b) as being anticipated by *Sakisako*, (U.S. Patent No. 4,749,552). Applicant respectfully traverses the rejection and submits that each of claims 1 - 6, 10 - 18, 22, 24 - 52, 55 - 59, 62 and 63 recite limitations that are not taught or disclosed by *Sakisako*.

Sakisako teaches an automatic titration apparatus for measuring the density of a liquid. The *Sakisako* titration apparatus includes a controller configured to monitor and regulate the operation of the apparatus, a sampling mechanism, an analysis mechanism, and a mechanism for feeding back the measurement results to regulate the density of the etching liquid being measured. However, Applicant submits that *Sakisako* fails to teach a replenisher, as recited in independent claims 1 and 27. Although the Examiner concludes that a circulation pump 1 discussed in *Sakisako* at column 3, lines 4-45 is equivalent to Applicant's replenishing system, Applicant submits that the Examiner's conclusion is misplaced. The circulation pump 1 discussed in *Sakisako* operates as a "sample circulating system" (see, column 3, lines 10-18), and does not operate to "dispense a controlled quantity of a predetermined constituent into the chemical solution bath," as recited in claims 1 and 27. Applicant submits that a circulation pump is not equivalent to a replenisher. As such, reconsideration of the rejection of claims 1, 27, and all claims depending therefrom.

Additionally, claims 1 and 27 recite a purge system that clears the analyzer and the delivery arrangement. *Sakisako* does not teach a purge system that purges both the analyzer and the fluid delivery arrangement that communicates fluid to the analyzer, as recited in claims 1 and 27. As such, reconsideration of the rejection of claims 1, 27, and all claims depending therefrom is respectfully requested.

Further, with regard to the replenisher, the Examiner indicates in the Response to Arguments section of the Office Action that during examination, the claims must be given their broadest reasonable interpretation, consistent with the specification. (See, MPEP 2111). Applicant's specification describes the replenisher as a device that dispenses a controlled quantity of a chemical constituent into the tank from which the sample was obtained, *i.e.*, to "replenish" a depleted portion of the chemical constituent in the solution that was just measured by the apparatus of the invention. (See, page 9, line 21 to page 10, line 2, page 18, lines 3-11, and page 23, lines 14-20). Further, Applicant submits that one of ordinary skill in the art would interpret the term "replenisher" to be a chemical delivery system configured to dispense a chemical into a bulk solution to replace or replenish a quantity of that chemical that has been used or depleted from the bulk solution. Applicant submits that this standard definition is consistent with Applicant's specification and with the recitation of a "replenisher" in the claims. However, Applicant submits that the Examiner's conclusion that a "circulation pump" comprises a replenisher is not supported by the definition of a replenisher recited in Applicant's specification or by the common definition or meaning of the term replenisher. Applicant submits that one of ordinary skill in the art would not equate a circulation pump for an analyzer beaker with a replenishing device. As such, Applicant submits that the recited "replenisher" is not anticipated by the circulation pump of *Sakisako*, and reconsideration of the rejection of claims 1, 27, and all claims depending therefrom over *Sakisako* is respectfully requested.

In view of the remarks above, reconsideration of the rejection of claims 1 and 27 over *Sakisako* is respectfully requested, as *Sakisako* fails to teach the replenisher or purge system recited in claims 1 and 27. Further, reconsideration of the rejection of claims 2 - 6, 10 - 18, 22, 24 - 26, and 28 - 37 is requested, as each of these claims

depend from either claim 1 or claim 27, and as such, also include the limitation of the replenisher or the purge system.

Claims 38 - 52, 55 - 59, 62 and 63 also stand rejected under §102 over *Sakisako*. Independent claims 38 and 68 recite purging the analysis cell and a sample delivery conduit with a purge system. Applicant submits that *Sakisako* fails to teach purging the sample delivery conduit, and as such, reconsideration of the rejection of claims 38 and 68, along with all claims depending therefrom, is respectfully requested.

Claims 1 - 8 stand rejected under 35 USC § 102(b) as being anticipated by *Becket* (U.S. Patent No. 5,389,546A). Applicant respectfully traverses the rejection and submits that claims 1-8 recite subject matter that is neither taught nor disclosed by *Becket*.

Becket teaches a method for monitoring constituent concentration in a metal containing fluid solution. However, *Becket* fails to teach a replenisher. More particularly, independent claim 1 recites a replenisher that dispenses a chemical constituent into the chemical solution bath in response to a constituent measurement. The Examiner takes the position that a peristaltic pump 28 (*see*, column 10, lines 20-68) that supplies a titrant to the reaction cell (*see*, column 11, lines 1 – 40) is equivalent to Applicant's replenisher. Applicant respectfully submits that the recited replenisher in fluid communication with a solution bath is not anticipated by the peristaltic pump of *Becket*. The peristaltic pump of *Becket* supplies fluid to the measurement cell, and is not in fluid communication with a solution bath. As such, reconsideration and withdrawal of the rejection of claim 1, along with all claims depending therefrom, over *Becket* is respectfully requested.

Claims 68 - 75 stand rejected under 35 USC § 102(b) as being anticipated by *Hoogendijk* (EPO Publication No. 0 517 339 A1). Applicant requests reconsideration of the rejection in view of Applicant's amendment to independent claim 68 to include purging the analysis cell and the fluid supply conduit that supplies the sample chemical solution to the analysis cell. Applicant submits that *Hoogendijk* fails to teach this limitation, and therefore, claims 68-75 are allowable over the reference. Reconsideration of the rejection is respectfully requested.

Claims 19 - 21 stand rejected under 35 USC § 103(a) as being unpatentable over *Sakiasko* (U.S. Patent No. 4,749,552) as applied to claims 1 - 6, 10 - 18, 22, 24 - 52, 62 and 63 above, further in view of *Suthergreen*, (U.S. Patent No. 5,351,725A). The Examiner states that *Sakiasko* fails to teach a liquid level monitoring arrangement. However, the Examiner concludes that one of ordinary skill in the art would have known to utilize a liquid level sensor. In response thereto, Applicant notes that claims 19 - 21 each depend from claim 1, which has been argued above as allowable. As such, Applicant submits that claims 19 - 21 are also allowable as a result of being dependent upon an allowable claim. Further, claim 19 recites a pressure monitoring system for measuring the pressure of a monitoring gas that is delivered to the chemical tank, which is not taught, disclosed, or otherwise suggested by *Sakiasko*. Claims 20 and 21 recite specific pressures at which the monitoring gas is supplied to the monitoring arrangement, which is not taught, disclosed, or otherwise suggested by *Sakiasko*. Therefore, reconsideration and withdrawal of the rejection of claims 19-21 under §103 over *Sakiasko* is respectfully requested.

Claims 53, 54, 60 and 61 stand rejected under 35 USC § 103(a) as being unpatentable over *Sakiasko* (U.S. Patent No. 4,749,552). The Examiner has taken the position that *Sakiasko* does not teach that the specific end point of the titration is repeated between approximately 2 and 9 times, but states that it would have been obvious for one in the art of "laboratory experimentation" to perform an experiment a number of times to verify data. Applicant respectfully traverses the rejection and respectfully submits that the cited reference fails to teach, show, or suggest each and every limitation recited in Applicant's claims.

As a preliminary matter, Applicant notes that claims 53, 54, 60, and 61 each depend from claim 38, which has been argued as allowable above. Accordingly, Applicant submits that claims 53, 54, 60, and 61 are also allowable as a result of being dependent upon an allowable base claim. Therefore, reconsideration and withdrawal of the rejection is respectfully requested. Further, Applicant respectfully submits that the Examiner's reliance upon the knowledge of one in the field of "laboratory experimentation" to reject Applicant's claims is misplaced, as Applicant's claims are not directed to the field of laboratory experimentation. Rather, Applicant's claims are

related to the field of semiconductor processing, and more particularly, to the field of mechanized sampling. In this field, throughput is critical, and as such, Applicant submits that taking the time to repeat a measurement between 2 and 9 times would not be a standard practice and is not disclosed by the art or known to one of ordinary skill in the art. As such, Applicant requests reconsideration of the Examiner's rejection of claims 53, 54, 60, and 61.

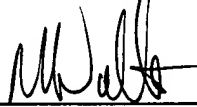
Claims 8, 64 and 67 stand rejected under 35 USC § 103(a) as being unpatentable over *Sakiasko* (U.S. Patent No. 4,749,552) as applied to claims 1 - 6, 10 - 18, 22, 24 - 52, 62 and 63 above, further in view of *Janzen* (U.S. Patent No. 4,095,272). Claims 65 and 66 stand rejected under 35 USC § 103(a) as being unpatentable over *Sakiasko* (U.S. Patent No. 4,749,552) and *Janzen* (U.S. Patent No. 4,095,272) as applied to claims 8, 64 and 67 above, further in view of *Nagy* (U.S. Patent No. 4,120,657). In response thereto, Applicant submits that each of the rejected claims depends, either directly or indirectly, from an independent claim (claims 1, 27, 38, or 68) that has been argued as allowable above. Accordingly, Applicant submits that each of the rejected claims are also allowable, as each of the dependent claims inherently includes each of the limitations recited in the base claim. Therefore, reconsideration of the rejections in view of the arguments with respect to the base claims is respectfully requested.

In conclusion, the references cited by the Examiner, alone or in combination, do not teach, show, or suggest the invention as claimed.

The secondary references made of record are noted. However, it is believed that the secondary references are no more pertinent to the Applicant's disclosure than the primary references cited in the office action. Therefore, Applicant believes that a detailed discussion of the secondary references is not necessary for a full and complete response to this office action.

Having addressed all issues set out in the office action, Applicant respectfully submits that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,



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